XP-002075170

1/1 - (C) WPI / DERWENT

AN - 73-80941U ç25!

- JP700045924 700527

TI - Crystallised glass fibre prodn - with high heat andmech strength

IW - CRYSTAL GLASS FIBRE PRODUCE HIGH HEAT STRENGTH

- (NIPG) NIPPON SHEET GLASS CO LTD PA

- JP48042814B B 000000 DW7352 000pp

ORD - 1900-00-00

- CO3B37/OO ; CO3C3/22 ; CO3C13/OO IC

FS - CPI

DC - L01

AB

- J73042814 The glass is composed of 65-82 wt.% of SiO2, 2-12 wt.% of Al203, 9-17 wt.% of Li20, 2-5 wt.% of P205 and 0-10 wt.% ù=1 metallic oxides selected from CaO, MgO, ZnO, BaO, and B2O3. These ingredients need to occupy $\hat{u}=95\%$ of the total wt. of the glass and the ratios of Li20 and Al203 to P205 should by 2.5-6 and 0.7:3 respectively. Li20 is a main crystalline substance and solvent, Al203 acts as devitrification inhibitor and P205 forms nucleus of crystal. These ingredients are melted together in resist-heating pot made of Pt-Rh alloy at ù1450 degrees C and the molten glass is spun into fibre. The water-cooled cooling plates installed under the nozzles reduce the temperature ú200 degrees C and lower the viscosity of glass thus preventing breaking and crystallise. fibre obtd. has a minute cross section of ú20 mu dia. and fine crystals of 0.2 mu are formed uniformly after the spun fibre is coated with sizing agent and subjected to heat treatment for 10-90 mins. at ú750 degrees C, pref. 550-700 degrees C.